

DETAILED ACTION

1. This communication is in response to Application No. 10/500,146 filed nationally on 09 July 2009 and internationally on 18 November 2003. The response presented on 02 December 2009, which cancels claims 2, 8, 15, and 21, amends claims 1, 3-5, 7, 9-10, 14, 16-20, 22-23, adds claim 30, and presents arguments, is hereby acknowledged. Claims 1, 3-7, 9-10, 14, 16-20, 22-23, and 30 are currently pending and have been examined.

35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Response to Arguments

3. Applicant's arguments, filed in the response dated 02 December 2009, with respect to the rejections under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, new grounds of rejections may appear below.

Claim Rejections

4. Claims 1, 9, 14, 22 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over deJong et al (US 2004/0064719 A1), and in further view of Epstein et al (US 2004/0042479 A1) and Day et al (US 7,222,185 B1).

Regarding claim 1, deJong teaches an information processing apparatus (deJong: Figure 3, item 300) that serves as a reproduction instruction apparatus that transmits a data reproduction process request packet to a node connected to a network and executes a reproduction of reproduction object data, based on return data, (deJong: Figure 3, item 360, 355, 380, 355; [0103] provides for requesting content and receiving content for use by user), the information processing apparatus comprising:

a processor configured to set a judgment value to indicate to the node whether to execute a process to return the return data to the reproduction instruction apparatus (deJong: [0106] provides the request can include delivery parameters such as recipient device; see also [0115]) and to generate the reproduction process request packet, which stores the judgment value and a designation of the reproduction object data (deJong: Figure 3; [0099] and [0115] provides content requests identify the requested content and contains delivery parameters);

a network interface unit that transmits the data reproduction process packet to the node at an address and receives the return data (deJong: Figure 3; [0103] provides the request is sent and content received).

deJong does not a data transmission setting unit configured to determine a transmission percentage for each of one or more transmission modes according to a demand level of the reproduction object data; or

setting an address in accordance with the one or more data transmission modes.

Epstein, in a similar field of endeavor, teaches a data transmission setting unit configured to determine a transmission percentage for each of one or more data transmission modes according to a demand level of the reproduction object data (Epstein: abstract; Figures 5A-6E; [0015]-[0026]; [0029]-[0040]; [0106]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Epstein for determining a bandwidth allocation percentage between transmission methods. The teachings of Epstein, when implemented in the deJong system, will allow one of ordinary skill in the art to set return delivery parameters based on multiple transmission modes, each using different bandwidth allocations based on demand levels. One of ordinary skill in the art would be motivated to utilize the teachings of Epstein in the deJong system in order to increase the efficiency of communication on the network.

The deJong/Epstein system does not teach wherein the packet address is set in accordance with the one or more data transmission modes.

Day, in a similar field of endeavor, teaches wherein the packet address is set in accordance with the one or more data transmission modes (Day: col 1, lines 30-40 provide packet addresses are function of whether the packet is unicast, multicast, or broadcast).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Day for changing the address based on the distribution characteristic. The teachings of Day, when implemented in the deJong/Epstein system, will allow one of ordinary skill in the art to address the packet based on mode as set forth by the bandwidth percentage. One of ordinary skill in the art would be motivated to utilize the teachings of Day in the deJong/Epstein system in order to use the correct addressing scheme with varying distribution modes, such as multicast or unicast.

Regarding claim 9, the deJong/Epstein/Day system teaches wherein the judgment value is a probability value (deJong: [0115] provides for delivery parameter being destination address, which is probability, 100% or 0%, of requesting device receiving content).

Regarding claim 14, this method claim contains limitations found within that of claim 1 and the same rationale of rejection is used, where applicable.

Regarding claim 22, this method claim contains limitations found within that of claim 9 and the same rationale of rejection is used, where applicable.

Regarding claim 30, the deJong/Epstein/Day system teaches the network interface unit receives a demand level of the reproduction object data (Day: col 8, lines 4-36 provides for controller receiving the content).

5. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over deJong et al (US 2004/0064719 A1); in view of Epstein et al (US 2004/0042479 A1) and Day et al (US 7,222,185 B1); and in further view of Gemmell (US 6,678,855 B1).

Regarding claim 6, the deJong/Epstein/Day system teaches wherein the data transmission setting unit is configured to select a broadcast transmission mode as the return data transmission mode, when the demand level of the reproduction object data is higher than a preset threshold value (Epstein: [0101]).

The deJong/Epstein/Day system does not teach wherein a transmission mode is a carousel transmission mode.

Gemmell, in a similar field of endeavor, teaches wherein a transmission mode is a carousel transmission mode (Gemmell: abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Gemmell for using a carousel mode. The teachings of Gemmell, when implemented in the deJong/Epstein/Day system, will allow one of ordinary skill in the art to use a carousel mode when popularity was high. One of ordinary skill in the art would be motivated to utilize the teachings of Gemmell in the deJong/Epstein/Day system in order to accommodate a mass audience by using a mass distribution scheme.

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Regarding claim 19, this method claim contains limitations found within that of claim 6 and the same rationale of rejection is used, where applicable.

6. Claims 3-5 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over deJong et al (US 2004/0064719 A1); in view of Epstein et al (US 2004/0042479 A1), Day et al (US 7,222,185 B1), and Gemmell (US 6,678,855 B1); and in further view of Thompson (US 7,143,143 B1).

Regarding claim 3, the deJong/Epstein/Day/Gemmell system teaches wherein the one or more data transmission modes include a carousel transmission mode (Gemmell: abstract), a chaining transmission mode (Epstein: [0131]-[0132] provides for requesting from external cache), and a client-server mode (Day: col 3, lines 40-62 provide for unicast).

The deJong/Epstein/Day/Gemmell system does not teach wherein the transmission modes include a distributed cache mode.

Thompson, in a similar field of endeavor, teaches wherein the transmission modes include a distributed cache mode (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Thompson for using a distributed cache. The teachings of Thompson, when implemented in the deJong/Epstein/Day/Gemmell system, will allow one of ordinary skill in the art to use a distributed cache mode when under certain popularity circumstances. One of ordinary skill in the art would be

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motivated to utilize the teachings of Thompson in the deJong/Epstein/Day/Gemmell system in order to process requests concurrently at high speeds.

Regarding claim 4, the deJong/Epstein/Day/Gemmell/Thompson system teaches wherein,

when the demand level of the reproduction object data is above a first predetermined threshold, the transmission percentage of the carousel transmission mode is 100% (Epstein: [0101] for changing modes based on popularity thresholds; [0103] for when certain mode is 100%; See Gemmell for mode being carousel);

when the demand level of the reproduction object data is below the first predetermined threshold and above a second predetermined threshold, the transmission percentage of the carousel transmission server is greater than 0% and less than 100% (Epstein: [0101] for changing modes based on popularity thresholds; Figures 5A-6E for when modes are varying percentages; See Gemmell for mode being carousel); and

when the demand level of the reproduction object data is below the second predetermined threshold and above a third predetermined threshold, the transmission percentage of the carousel transmission server is greater than 0% and less than 100% (Epstein: [0101] for changing modes based on popularity thresholds; Figures 5A-6E for when modes are varying percentages; See Gemmell for mode being carousel).

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Regarding claim 5, the deJong/Epstein/Day/Gemmell/Thompson system wherein, when the demand level of the reproduction object data is below the third predetermined threshold, the transmission percentage of the client server mode is 100% (Epstein: [0101] for changing modes based on popularity thresholds; [0103] for when certain mode is 100%; [0098] for all unicast).

Regarding claim 16, this method claim contains limitations found within that of claim 3 and the same rationale of rejection is used, where applicable.

Regarding claim 17, this method claim contains limitations found within that of claim 4 and the same rationale of rejection is used, where applicable.

Regarding claim 18, this method claim contains limitations found within that of claim 5 and the same rationale of rejection is used, where applicable.

7. Claims 7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over deJong et al (US 2004/0064719 A1); in view of Epstein et al (US 2004/0042479 A1) and Day et al (US 7,222,185 B1); and in further view of Noma et al (US 2003/0055988 A1).

Regarding claim 7, the deJong/Epstein/Day system teaches a data recovery processing unit configured to execute processing on the return data (deJong: [0115] provides for streaming media).

The deJong/Epstein/Day system does not teach wherein the processing is a de-interleave process and an FEC decoding process.

Noma, in a similar field of endeavor, teaches wherein the processing is a de-interleave process and a FEC decoding process (Noma: [0044]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Noma for using interleaving/deinterleaving and FEC encoding/decoding of the data. The teachings of Noma, when implemented in the deJong/Epstein/Day system, will allow one of ordinary skill in the art to interleave and encode data transmitted. One of ordinary skill in the art would be motivated to utilize the teachings of Noma in the deJong/Epstein/Day system in order to quickly and reliably correcting transmission errors.

Regarding claim 20, this method claim contains limitations found within that of claim 7 and the same rationale of rejection is used, where applicable.

Allowable Subject Matter

8. Claims 10 and 23 are allowed.
9. The examiner requests an interview to clarify the subject matter of claims 1 and 14. See contact information in *Conclusion*.

Citation of Pertinent Prior Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Mendelson et al (US 5,568,614) discloses a suppress reply flag attached to client requests informing a server to suppress a reply.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 9:00am - 7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571)272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./

Examiner, Art Unit 2442

/Asad M Nawaz/

Primary Examiner, Art Unit 2455